

What is claimed is:

1. A holographic ROM system comprising:
 - a light source for emitting a laser beam;
 - 5 an expanding unit for expanding the laser beam; and
 - a mask for modulating a certain portion of the expanded laser beam to thereby generate a signal beam which is directly provided to a holographic medium and sifting the remainder portion of the expanded laser beam to thereby generate a reference beam which is provided to a conical mirror reflecting the reference beam toward the holographic medium,
- 10 wherein the holographic medium includes: a recording region onto which both the reference beam and the signal beam are projected; and a transparent region which passes through the reference beam sifted by the mask, to thereby provide the reference beam to the conical mirror.
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- 20 2. The holographic ROM system of claim 1, wherein the transparent region is located at the center of the holographic medium for passing therethrough the reference beam toward the conical mirror and the recording region having an annular-shape is located around the transparent region.
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3. The holographic ROM system of claim 1, wherein the

mask includes a data pattern region for modulating the certain portion of the laser beam and a beam passing region for sifting the remainder portion of the laser beam.

5 4. The holographic ROM system of claim 3, wherein the size and the shape of the beam passing region equals to those of the transparent region of the holographic medium.

10 5. The holographic ROM system of claim 1, wherein the conical mirror is fixed by a holder which is installed on the back side of the conical mirror.

15 6. The holographic ROM system of claim 1, wherein the conical mirror is replaced with another one having a different base angle for multiplexing.

7. The holographic ROM system of claim 6, wherein an angle $\angle 2a$ satisfies the relationship of:

20 $\angle 2a < \sin^{-1}(X_1/X_3),$

wherein $\angle 2a$ is the angle between the proceeding direction of the reference beam and the surface of the holographic medium, X_1 is one-half of the full-size of the reference beam which is projected onto the conical mirror, and X_3 is one-half of the difference between the outer and

the inner diameters of the recording region of the holographic medium.

8. The holographic ROM system of claim 1, wherein the
5 distance between the conical mirror and the holographic
medium is varied for multiplexing.

9. The holographic ROM system of claim 8, wherein the
distance is determined by the formula of:

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$$Y = X_1 \cdot \tan 2a,$$

wherein X_1 is one-half of the full-size of the reference beam which is projected onto the conical mirror,
15 and $\angle 2a$ is the angle between the proceeding direction of the reference beam and the surface of the holographic medium.